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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/583,054

05/09/2007

Michael Gerlach

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EXAMINER

NGUYEN, TU MINH

ART UNIT

PAPER NUMBER

3748

MAIL DATE

DELIVERY MODE

05/25/2010

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/583,054	<b>Applicant(s)</b> GERLACH, MICHAEL	
	<b>Examiner</b> TU M. NGUYEN	<b>Art Unit</b> 3748	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 16 February 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 12-41 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12, 13, 18-26 and 35-41 is/are allowed.
- 6) ☒ Claim(s) 14-17 and 27-30 is/are rejected.
- 7) ☒ Claim(s) 31-34 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>20091130</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

1. An Applicant's Amendment filed on February 16, 2010 has been entered. Claim 11 has been canceled; claims 12-18 have been amended; and claims 19-41 have been added. Overall, claims 12-41 are pending in this application.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office Action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. **Claims 14-17 and 27-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Arora et al. (U.S. Patent 5,709,080).**

Re claims 14 and 27, as shown in Figures 1-3, Arora et al. disclose a method and a device for operating a metering valve (20) which sets a flow rate of a reagent to be introduced into an exhaust gas area (11) of an internal combustion engine (12), the method comprising:

- providing a diagnosis (the routine shown in Figure 3) of the metering valve including an analysis of a measure of a flow rate on the basis of a pressure difference during a diagnosis time;
- after an occurrence of a diagnosis start signal (step 305), bringing the reagent to a predefined diagnosis start pressure (step 310) while the metering valve is kept closed;

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- then setting the metering valve at a predefined flow rate (predefined flow rate is set to zero because the metering valve is still kept closed);
- fixedly predefining the diagnosis time; and
- supplying a warning signal (in step 335) when the pressure difference exceeds a predefined pressure difference limit during the diagnosis time (step 325 with Yes answer).

Re claims 15 and 28, in the method and device of Arora et al., the method further comprises providing an adaptation of a metering valve signal delivered by a metering control unit to the metering valve during metering operation as a function of the ascertained measure for the flow rate.

Re claims 16 and 29, in the method and device of Arora et al., the method further comprises providing an adaptation of a metering valve signal delivered by a metering control unit to the metering valve during metering operation as a function of the pressure difference measured in the predefined diagnosis time.

Re claims 17 and 30, in the method and device of Arora et al., the start signal includes a first diagnosis start signal supplied by an internal combustion engine control unit (see Figure 2).

#### ***Allowable Subject Matter***

4. Claims 12, 13, 18-26, and 35-41 are allowed.

Claims 31-34 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

5. Applicant's arguments with respect to the references applied in the previous Office Action have been fully considered but they are not persuasive.

In response to applicant's argument that Arora et al. fail to disclose the steps of (a) bringing the reagent to a predefined diagnosis start pressure while the metering valve is kept closed; and (b) setting the metering valve at a predefined flow rate (page 9 of Applicant's Amendment), the examiner respectfully disagrees.

With regard to (a), Arora et al. perform a routine shown in Figure 3 to determine whether or not there is a leak in a reagent supply sub-system for an exhaust purification system, wherein a "check time" of 8 hours (step 305) is monitored before a first pressure measurement is performed (in step 310). The "check time" is necessary for the pressure in the reagent supply sub-system to come to a relatively steady and constant value. Thus, Arora et al. clearly disclose a step of bringing the reagent to a predefined diagnosis start pressure while the metering valve is kept closed.

With regard to (b), even with the predefined flow rate at zero due to the closure of the metering valve, Arora et al. still disclose the step of setting the metering valve at a predefined flow rate.

***Conclusion***

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

***Prior Art***

7. The IDS (PTO-1449) filed on November 30, 2009 has been considered. An initialized copy is attached hereto.

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*Communication*

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Tu Nguyen whose telephone number is (571) 272-4862.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Thomas E. Denion, can be reached on (571) 272-4859. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Tu M. Nguyen/

TMN

Tu M. Nguyen

May 23, 2010

Primary Examiner

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